

Where Is the Nursing in SNOMED CT®? CTGFN has the Answer!

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Abstract

The SNOMED[®] CTGFN (Convergent Terminology Group for Nursing) is a working group reporting to the SNOMED International Editorial Board. They are charged with ensuring a terminology supportive of nursing's requirement for describing patient care. The strategies utilized for nursing content follow.

Background

Concept-based terminology goals are to represent a discipline's practice domain, ensure interoperability between systems, and support secondary uses (quality improvement, research, administrative reports, etc.). This is accomplished through development of a model supporting the dissection of nursing terms and phrases into components to achieve interoperability. Without the same model or parsing pattern, two systems can't share results.¹

CTGFN Activities

ANA Recognized Nursing Languages. The CTGFN developed a nursing content integration plan, endorsed by the SNOMED International Editorial Board, to formulate agreements with existing ANA recognized nursing classification systems. NANDA², NIC³, NOC⁴, PND⁵, HHCC⁶ and the Omaha System⁷ agreed to participate. The basic underlying principles for the addition of nursing concepts into SNOMED are: (1) A nursing concept may be identical to an existing SNOMED CT concept. (Exact match) (2) A nursing concept may be a synonym of an existing SNOMED CT concept and is added as such. (3) A nursing concept may be new (not currently contained within the SNOMED CT terminology). These concepts are added as new, given a SNOMED CT code, modeled using current attributes, and given a specific IS_A relationship, placing it within the appropriate hierarchy. In each of the above three scenarios, the concept is also assigned an internal (not released) identifier representing the source nursing terminology. This "property tag" then allows these concepts to be uniquely identified in order to populate the generated mappings. These mapping tables provide linkages between the specific nursing terminologies and SNOMED CT.

Nursing Terminology Modeling in SNOMED CT. Each concept is modeled, with CTGFN approval, according to predefined attributes and then placed within an appropriate hierarchy through IS_A relationships. Nursing diagnoses are modeled within the Findings hierarchy and interventions are modeled within the Procedure hierarchy (examples will be shown). The CTGFN is currently working on developing the attributes for modeling goals/outcomes and a modeling approach for context of care issues (e.g., 'negation' and 'history of').

Nursing Terminology Collaboration Efforts. For the last five years CTGFN has participated in the Nursing Terminology Summit. Work developed there was tested and then applied to the integration of nursing content into SNOMED CT. Nursing modeling efforts have been transformed into both attributes and QA processes for ensuring accurate representation of nursing concepts within this hierarchical terminology structure. Collaborative efforts include critiquing both the ISO and CEN work on standards for nursing diagnosis and intervention terminology models. CTGFN has also participated in HL7's Patient Care and Vocabulary TCs to promote convergence of standards affecting representation of nursing concepts.

References

1. Cockburn, A: *Agile Software Development*, Addison-Wesley, Boston, 2002.
2. NANDA: *Nursing Diagnoses: Definitions & Classification, 2001-2002*, NANDA, Philadelphia, 2002.
3. McCloskey J, Bulechek G: *Nursing Interventions Classification (NIC)*, CV Mosby, St. Louis, 2000.
4. Johnson M, Maas M, Moorhead S: *Nursing Outcomes Classification (NOC)*, CV Mosby, St. Louis, 2000.
5. AORN, Inc, *Perioperative Nursing Data Set (PND): The Perioperative Nursing Vocabulary*, AORN, Inc. Publications Department, Denver, 2002.
6. Saba VK: *Home Health Care Classification (HHCC)*, Caring Mag 1992;11(4):58-60.
7. Martin KS, Scheet NJ: *The Omaha System: Applications for Community Health Nursing*, WB Saunders, Philadelphia, 1992.